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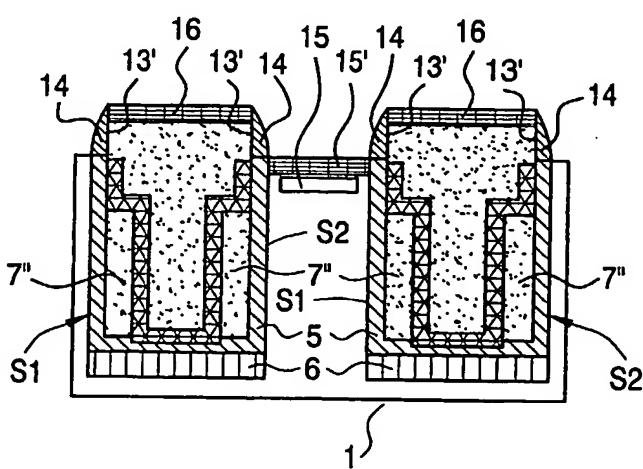
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— with international search report

[Continued on next page]

(54) Title: NON-VOLATILE MEMORY CELL AND METHOD OF FABRICATION



(57) Abstract: Semiconductor device comprising a vertical split gate non-volatile memory cell, for storing at least one bit, on a semiconductor substrate, comprising on the substrate a trench, a first active area, a second active area, a channel region extending along a sidewall of the trench, the trench having a length extending in a first direction and a width extending in a second direction perpendicular thereto and the trench being covered on the sidewalls by a tunnel oxide and including at least one gate stack of a floating gate and a control gate, wherein the control gate extends to the bottom part of the trench, a first floating gate is located at a left trench wall to form a first stack with the control gate, and a second floating gate is located at a right trench wall to form a second stack with the control gate.



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**B. FIELDS SEARCHED**

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Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

EPO-Internal, PAJ

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
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A	-----	5-14
X	US 2002/096703 A1 (VORA MADHUKAR B) 25 July 2002 (2002-07-25) the whole document	1-4,15
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X	US 5 258 634 A (YANG MING-TZONG) 2 November 1993 (1993-11-02) the whole document	1,3,4,15
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X	US 6 130 453 A (MEI SHAW-NING ET AL) 10 October 2000 (2000-10-10) the whole document	1,3,4,15
A	-----	5-14
		-/-

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Patent family members are listed in annex.

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## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5 386 132 A (WONG CHUN C D) 31 January 1995 (1995-01-31) the whole document	1, 3, 4, 15
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